



Serial No.: 09/889,364

Confirmation No.: 3769

Applicant: SAWDON, Christopher et al.

Atty. Ref.: 11836.0691.PCUS00

**REMARKS:****REMARKS REGARDING CLAIMS AMENDMENTS:**

The above noted amendments to the claims have been made so that the scope and language of the claims is more precise and clear in defining what the Applicant considers to be the invention.

Specifically, the amendment to claim 1 indicates that the fluids of the claimed subject matter are substantially free of polyvalent metal cations and exhibit a conductivity of at least  $10^4$   $\mu\text{S/m}$ . Claims 1, 3, 4, 5 and 9 have all been amended to correct the format of the Markush Groups presented by those claims. Claims 3-7 and 9-11 have been amended to correct the format and presentation of these multiply dependent claims. Claim 6 has been amended to correct a typographical error in the term wellbore. New claim 12 has been added to claim the subject matter canceled from unamended claim 8.

Support for the above amendments to the claims can be found in the original specification as filed. Specifically, support for the amendments to claim 1 can be found on page 4, paragraph 5, and page 5, 3<sup>rd</sup> paragraph.

The claims and amended claims are submitted as being clearly distinct and patentable over the art of record and therefore their entry and allowance by the Examiner is requested.



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**IN RESPONSE TO THE OFFICE ACTION:****OBJECTION TO CLAIMS 4-11:**

Claims 4-11 were objected to as being in improper multiply dependent form.

In response, Applicants has amended the claims as noted above to eliminate any multiple dependency from multiple dependent claims.

In view of the above, Applicants request the reconsideration and withdrawal of the objection to claims 4-11 and ask that the Examiner indicate the allowance of these claims in the next paper from the Office.

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**FIRST REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH:**

Claims 1-3 were rejected under 35 U.S.C. §112, second paragraph as being indefinite and failing to particularly point out the Applicant's invention.

In response, claims 1-3 have been amended so as to the specific concerns indicated by the Examiner in the Office Action. Specifically, the Markush Group recitation in claims 1-3 has been adjusted to bring the claim into an acceptable format.

Applicant submits that the above amendments obviate the rejection of the claims under 35 U.S.C. §112, second paragraph and thus ask that the Examiner reconsider and withdraw the rejection of the claims and indicate their allowance in the next paper from the Office.

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**FIRST REJECTION UNDER 35 U.S.C. § 103:**

Claims 1-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable given U.S. Patent No. 4,659,486 issued to Bobby R. Harmon (the Harmon reference).

Applicants request that the Examiner reconsider and withdraw the above rejection of the claims in view of the following:

A determination under 35 U.S.C. §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *In re Mayne*, 104 F.3d 1339, 1341, 41 USPQ 2d 1451, 1453 (Fed. Cir. 1997). An obviousness determination is based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed



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invention and the prior art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), see also *Robotic Vision Sys., Inc. v. View Eng'g Inc.*, 189 F.3d 1370, 1376, 51 USPQ 2d 1948, 1953 (Fed. Cir. 1999).

In line with this standard, case law provides that "the consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chem.*, 837 F.2d 469, 473, 5 USPQ 2d 1529, 1531 (Fed. Cir. 1988). The first requirement is that a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ 2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617. The second requirement is that the ultimate determination of obviousness must be based on a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 903-904, 7 USPQ 2d 1673, 1681 (Fed. Cir. 1988); see also *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-52 (Fed. Cir. 1985). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ 2d 1780, 1783-84 (Fed. Cir. 1992).

The Examiner bears the burden of establishing a *prima facie* case of obviousness. *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ 2d 1210, 1214 (Fed. Cir. 1995). The burden to rebut a rejection of obviousness does not arise until a *prima facie* case has been established. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993). Only if the burden of establishing a *prima facie* case is met does the burden of coming forward with rebuttal argument or evidence shift to the applicant. *In re Deuel*, 51 F.3d 1552, 1553, 34 USPQ 2d 1210, 1214 (Fed. Cir. 1995), see also *Ex parte Obukowicz*, 27 USPQ 2d 1063, 1065 (B.P.A.I. 1992).

Applicant submits that nothing in the art of record teaches or suggests the subject matter recited in independent claim 1 and thus a *prima facie* case obviousness has not been established. As positively recited in claim 1, the claimed subject matter is directed to an electrically



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conductive invert emulsion based drilling fluid that includes: i) from about 0.2% to about 10% by volume of carbon black particles, and ii) one or more emulsifying surfactant(s) selected from: nonionic emulsifiers of Hydrophilic-Lipophilic Balance (HLB) less than about 12, and anionic surfactants wherein the counter-ion is any of alkali metal, ammonium, or hydrogen ions. Further as is now positively recited in claim 1, the wellbore fluid is substantially free of polyvalent metal cations and the wellbore fluid has conductivity of at least  $10^4 \mu\text{S/m}$ .

Applicants submit that nowhere in the Harmon reference is there any teaching to formulate such a drilling fluid. In fact as indicated in the Examples of the present application (see Example 2), conventionally formulated invert emulsion-drilling fluids (such as that of the Harmon reference) have very low conductivity (i.e. less than  $10^1 \mu\text{S/m}$ ) even when carbon black is included in the formulation. It is only by appreciating that the very low conductivity is caused by the presence of polyvalent metal cations (such as calcium ion) and then substantially eliminating such cations that the results of the present invention can be achieved.

Applicants submit that nowhere in the Harmon reference is there any teaching or suggestion to formulate a drilling fluid that is substantially free of polyvalent metal cations. Further, nowhere is there any teaching or suggestion that such a fluid could achieve a conductivity of at least  $10^4 \mu\text{S/m}$ . In fact as indicated in Example 2, the simple addition of carbon black to a conventionally formulated invert emulsion does not substantially increase the conductivity of the fluid. Nowhere is there any suggestion or teaching to substantially eliminate the polyvalent metal cations in the fluid formulation. Further, the mere fact that the prior art may be modified does not make the modification obvious, *unless the prior art suggested the desirability of the modification. In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q. 2d 1780, 1783-84 (Fed. Cir. 1992) (emphasis added).

Given the above, Applicants request that the rejection of claim 1 under 35 U.S.C. § 103(a) be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

Under the principles of 35 U.S.C. § 112, 4<sup>th</sup> paragraph, dependent claims 2 and 3 contain all of the limitation recited in independent claim 1. Thus the arguments made above with regard to claim 1 are equally applicable to claims 2 and 3. Therefore Applicants submit that the subject



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matter recited in claims 2 and 3 is not taught or suggested by the Harmon reference and request the reconsideration of the rejection under 35 U.S.C. §103(a).

Given the above, Applicant requests that the rejection of claims 1-3 under 35 U.S.C. §103(a) be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

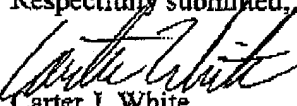
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The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No.01-2508, referencing Order No. 11836.0691.PCUS00.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

  
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